THE CITY OF SAN DIEGO

Frequently Asked Questions

Recycled Water

A water resource strategy that includes conservation, recycled water and groundwater supplies will help meet future water needs.

City of San Diego
PUBLIC UTILITIES
Water & Wastewater

City of San Diego
Public Utilities Department
Long-Range Planning &
Water Resources Division
600 B Street, Suite 600
San Diego, CA, 92101
(619) 533-7572
www.purewatersd.org

Water Purification Demonstration Project

Does San Diego need more water?
Water is essential to our quality of life. The City of San Diego imports approximately 85 to 90 percent of its water supply from Northern California and the Colorado River. For the past few years, California has been affected by a historic dry period and a drought on the Colorado River. In addition, legal and regulatory decisions to protect endangered species in the Sacramento – San Joaquin Delta have resulted in restrictions on the amount of water that can be imported from Northern California. Population projections predict the City will need more water in the future than is used today. Since San Diego is at the end of the imported water pipeline, and receives an average of 10 inches of rain each year, we need to develop all possible local water supplies to secure a reliable supply of water for present and future residents and businesses in San Diego.

Why can't we just conserve more water?
Using less water through conservation should always be the first step in protecting our local water supply. The City's conservation programs have helped reduce our dependence on imported water by saving more than 33,000 acre-feet of drinking water a year, which is enough to meet the needs of around 66,000 typical families for a year. However, while conservation is important, efforts to save water need to be combined with other sustainable strategies to meet San Diego's water needs in the future.

Doesn't the City already recycle water?
Yes. The City of San Diego operates two state-of-the-art water recycling facilities capable of producing close to 45 million gallons a day of recycled water for irrigation and industrial purposes. Recycled water distribution requires a separate pipeline system of purple pipes to distinguish them from drinking water pipelines. The city's recycled water distribution system continues to expand. However, using recycled water for irrigation is seasonal, so the excess water is discharged into the ocean during rainy periods. Constructing the purple pipe distribution system is also costly, so the City is examining other ways to use more recycled water including reservoir augmentation.

Does the City have a recycled water use plan?
Yes, the City has a recycled water master plan and is always looking for ways to reuse existing water supplies. In 2005 the City conducted a comprehensive, balanced, impartial and science-based Water Reuse Study of all recycled water opportunities. The study included a public participation component and concluded that Indirect Potable Reuse or Reservoir Augmentation was the preferred method of implementing the expanded use of recycled water in San Diego.

What has been done since the 2005 Water Reuse Study?
The Water Reuse Study was the first phase of the City's plan to expand the use of recycled water. The second phase is now underway to examine the feasibility of reservoir augmentation through a demonstration project.

What is Reservoir Augmentation?
Reservoir augmentation is a multi-step process that is being examined by the Water Purification Demonstration Project. It includes using advanced water purification processes on recycled water which can be blended with existing "raw" water supplies. The Demonstration project will not send purified recycled water to a local reservoir. The concept of Reservoir Augmentation is to add purified recycled water to a local reservoir which can be treated to drinking water standards and distributed to the public.

Continued...

Frequently Asked Questions

What is the Water Purification Demonstration Project?
The Demonstration Project is the second phase of the City's plan to expand the use of recycled water. It will evaluate the use of advanced water purification technology and the feasibility of producing water that can be sent to blend with existing water in a local reservoir. The Demonstration Project includes a study of San Vicente Reservoir, research to determine a pipeline alignment, a public outreach education program and the construction and operation of a pilot scale advanced water purification facility.

Is this project toilet-to-tap?
Although "toilet-to-tap" has been used to describe this project in the past, it is not an accurate description. The notion that wastewater can be sent directly to drinking water taps is inaccurate. "Toilet-to-tap" is misleading because it ignores key treatment steps and strict testing requirements that are involved in the recycling process. In California, all forms of water are highly regulated and monitored to ensure safety. Since there is no new water on Earth, all water goes through a natural cycle and is essentially recycled water before it is treated and tested before being sent to drinking water taps. This project is strictly a demonstration and at no point during the demonstration phase will recycled water be distributed to drinking water taps.

What is "Advanced Water Purification"?
Advanced water purification is a state-of-the-art process that purifies highly treated wastewater to a level of distilled water quality. This process includes membrane filtration, reverse osmosis, and disinfection through the use of ultra violet light and peroxide. The resulting purified water is of higher quality than existing raw water sources and can be used as a locally controlled source to augment reservoir supplies.

Is reservoir augmentation safe?
Yes. There are many public health protection steps that must be taken before highly purified recycled water can be used for reservoir augmentation. A state-of-the-art process of water purification produces water that is of distilled water quality. After this water is put in the reservoir, it blends with existing supplies of untreated or raw water. All water that is distributed to public drinking water taps must meet strict state and federal drinking water standards. Water stored in open reservoirs (lakes) is processed through a drinking water treatment plant which eliminates all harmful substances. After final treatment, the water meets drinking water standards before it can be distributed to homes and businesses. The water treatment and distribution system is also monitored regularly to ensure safety.

Will recycled water be added to our drinking water now?
No. The Demonstration Project will test the key functions of reservoir augmentation on a small scale and no recycled water will be sent to the reservoir or distributed to customers during the demonstration phase. The City will operate a pilot scale facility for at least one year to analyze operations. At the same time, an independent advisory panel of experts will provide oversight of project research to determine if the treatment system meets all water quality, safety and regulatory requirements necessary to determine the viability of a full scale project.

What are the benefits of reservoir augmentation?
Reservoir augmentation can provide a locally controlled, drought-proof supply of high-quality water. If implemented, a full-scale project will increase the utilization of recycled water and save energy by reducing San Diego's dependence on imported water. Reservoir augmentation could also improve the water quality in the San Vicente Reservoir and have a positive impact on the environment by producing less discharge into the ocean.

Would you like to know more?
City staff is reaching out to as many San Diegans as possible and would like to present information about the Demonstration Project to your organization. Please call (619) 533-7572 or visit the project website at www.purewatersd.org for more information.